

REMARKS

Applicants concurrently file herewith an Excess Claim Fee Payment Letter, and corresponding excess claim fee, for three (3) excess total claims.

Claims 1-41 are all of the claims presently pending in the application. Claims 1, 7, 11, 15, 20, 29 and 31 have been amended to more particularly define the claimed invention. Claims 39-41 have been added to provide more varied protection for the claimed invention and to claim additional features of the invention.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicants specifically state that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1-38 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Chefalas et al. (U.S. Patent Application Publication No. 2002/0138786) (hereinafter "Chefalas"). Claim 31 stands rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

This rejection is respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

The claimed invention of exemplary claim 1 provides a method of reducing warranty costs. The method includes discriminating, by said computer system, between a hardware-induced problem or outage and a software-induced problem or outage in the

computer system based on said indicators (see e.g., Application at page 8, line 10 through page 9, line 21). This feature allows the claimed invention to collect pre-outage data as well as post-outage data, automatically identify system outages and automatically determine whether the outage was due to the hardware or the software while limiting the amount of unnecessary service calls and unnecessary hardware replacements (see e.g., Application at page 3, lines 15-20).

II. NON-STATUTORY SUBJECT MATTER REJECTION

The Examiner has rejected claim 31 under 35 U.S.C. §101 as being directed to non-statutory subject matter. The Examiner alleges that the preamble must consist of a “computer-readable medium storing computer-readable instructions, which are executable to perform the desired method”.

Applicants submit that a “computer program embodied in a tangible medium, such as a floppy diskette, are patentable subject matter under 35 U.S.C. §101, and must be examined under §§102 and 103”, *Beauregard, In re* 53 F.3d 1583, 35 U.S.P.Q. 2d 1383. The claimed invention of exemplary claim 31 recites, inter alia, “[a] signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to perform a method for reducing warranty costs” (emphasis Applicants’).

Applicants respectfully submit, that the claimed invention (as exemplarily defined by claim 31) is directed to a tangible medium that can be used to direct a digital processing apparatus (such as a computer) to function in a particular manner when used by the digital processing apparatus. The claim language clearly states, in the preamble,

that the program of machine-readable instructions is executable by a digital processing apparatus to perform the inventive method of the claimed invention. Furthermore, this program of machine-readable instructions is stored on a tangible medium.

It appears that the Examiner has rejected claim 31 because the preamble recites “a signal-bearing medium”. Applicants respectfully submit that such a “signal-bearing medium” is a tangible medium such as a floppy diskette, CD-ROM, etc. as is disclosed in the specification.

However, merely in an effort to speed prosecution, Applicants have amended claim 31 to recite a “computer-readable medium tangibly embodying a program of computer readable instructions” as suggested by the Examiner.

In view of the foregoing, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

III. THE PRIOR ART REFERENCE

The Examiner alleges that Chefalas teaches the claimed invention of claims 1-38. Applicants submit, however, that there are elements of the claimed invention, which are neither taught nor suggested by Chefalas.

That is, Chefalas does not teach or suggest “*discriminating, by said computer, between a hardware-induced problem or outage and a software-induced problem or outage in the computer system based on said indicators*” as recited in claim 1 and similarly in claims 7, 11, 15, 20, 29 and 31.

The Chefalas patent describes a software agent that, once a problem has been detected, creates a list of hardware on the system and a list of software on the system (see e.g., Chefalas at paragraphs [0035]-[0036]).

For the hardware items, it "performs a status check by polling or querying each device regarding its status of operations." For the software items, it "scans event and application logs for the software applications" in order to determine whether they have emitted any error events.

Clearly, the novel features of the claimed invention are not taught or suggested by Chefalas. The Examiner attempts to rely on paragraphs [0031] - [0037] of Chefalas to support his allegations. The Examiner, however, is clearly incorrect.

That is, nowhere in these passages (nor anywhere else for that matter) does Chefalas teach or suggest a method of reducing warranty costs including discriminating between a hardware-induced problem or outage and a software-induced problem or outage in the computer system based on said indicators.

Chefalas is merely directed to automating the process of problem diagnosis and selecting a recovery action by transferring information from a problematic computer to a web site, looking up a solution to that problem, and sending that solution back to the customer. Thus, it is a solution for automating web-based customer support to improve its quality.

In contrast, the claimed invention reduces warranty costs by discriminating between hardware and software problems, to reduce the amount of non-faulty hardware that is returned to the manufacturer.

The Examiner alleges that Chefalas teaches the feature of discriminating between hardware and software problems. The Examiner attempts to rely on paragraphs [0035] and [0036], as well as Figure 4 of Chefalas to support his allegations. The Examiner, however, is clearly incorrect.

These passages and this figure of Chefalas merely teach discovering and building a list of all software and hardware problems and sending that list to a web server to determine any new updates to fix the problems (see Chefalas at Figure 4, box number 414). Nowhere, do these passages or this figure teach or suggest discriminating between hardware and software problems.

In the Examiner's rejection of claim 1 (as well as claims 2-38) the Examiner merely recites Applicants' claim language and then cites a paragraph or figure number of Chefalas, without identifying any features or claim language in Chefalas that correspond to the claim limitations of the claimed invention.

Therefore, if the Examiner wishes to maintain this rejection, Applicants respectfully request the Examiner to specifically point out the features in Chefalas that correspond to the features of the claimed invention, as opposed to merely reciting Applicants claim language.

Moreover, nowhere does Chefalas teach or suggest that *"if the outage event comprises a software outage or problem, determining whether automatic recovery is possible, and if so, invoking an automatic recovery mechanism and notifying a customer or field support personnel that said software outage or problem is the cause of the event, and identifying a faulty subsystem for subsequent troubleshooting"* or that *"if the event the outage event comprises a software outage or problem, determining whether*

automatic recovery is possible, and if not, indicating that the event is due to said software outage or problem, and is not automatically recoverable, and notifying a customer or service technician to manually recover the fault” as recited in dependent claims 16 and 17, respectively.

The Examiner has rejected claim 16 by stating that Chefalas teaches that the software agent determines whether automatic recovery is possible, and if so, invokes an automatic recovery mechanism. The Chefalas patent, however, is oriented around automated discrimination but manual repair of problems, by a user who is looking at a web page.

The claimed invention of dependent claims 16 and 17, on the other hand, defines a fully automated solution, and teaches automatic recovery without any user intervention, if the problem is so diagnosed as being an automatically recoverable software problem. One example of such a recoverable software fault is a resource exhaustion problem (e.g., memory leak), where the system can recover by stopping and restarting the software that is causing the memory leak (Note that the data sources described by Chefalas are inadequate to detect this type of problem). Only if the automatic recovery is not possible, or if it is determined that it is a hardware problem, is the user contacted. This is a significant extension to Chefalas because it uses the analytical capability described in the application to completely avoid a service call.

Indeed, Chefalas merely teaches a system and method for supporting one or more registered products at a computing device where the computing device is enabled to communicate with a support web server. In Chefalas, once a user detects a computer system problem or outage the user must contact the support web server. Once the user

loads the web page for product support the user selects a “diagnose” button on the web page for diagnosing the user’s computer device that has failed to operate in an expected manner. The web server then uploads onto the user’s computing device a software agent for diagnosing the cause of the computer system problem or outage (see Chefalas at page 3, paragraph [0028]).

According to the claimed invention of exemplary dependent claims 39 and 41, the software problems may be automatically recovered without any communication to a website. That is, the problematic computer, on its own and without any communication with a web site, determines whether the problem is a software or a hardware problem, and if it is a software problem for which an automatic recovery method is possible, invoking that recovery method without requiring an intervention (as recited in exemplary claim 16).

In the Response to Arguments section of the Office Action the Examiner alleges that Chefalas teaches automatic recovery (see Office Action dated March 8, 2005 at page 12). However, Chefalas merely teaches automatic identification and transmittal of a recovery action to a customer, who is still expected to use a browser to access this recovery action and presumably carry out this recovery action manually (see Chefalas at paragraph [0036]). It is the customer support that is being automated in the Chefalas patent, not the recovery action.

In contrast, in the claimed invention, once the problem diagnosis has been made and it has been determined that an automatic recovery action can be taken, this recovery action can be carried out automatically without communication with a web server, transmission of a recovery action to a user or having a user perform this recovery action.

Moreover, nowhere does Chefalas teach or suggest that “*said system health monitoring program monitors at least one of resource consumption data, system and application software error logs, system utilization and performance data, and software error counts*” as recited in exemplary dependent claim 22 and similarly recited in exemplary dependent claim 32.

Again the Examiner merely recites Applicants’ claim language and cites paragraphs [0035]-[0036] of Chefalas, without pointing out the specific language in Chefalas that teaches the claim limitations. Indeed, nowhere does Chefalas teach or suggest the specific indicators recited in claims 22 and 32. If the Examiner wishes to maintain this rejection, Applicants respectfully request the Examiner to specifically point out the language in Chefalas that teaches or suggests the features recited in claims 22 and 32.

Moreover, nowhere does Chefalas teach or suggest that “*said system health monitoring program gathers information after the event, including at least one of error logs, crash dumps of memory, error codes, offline or power-on hardware diagnostics, and hardware error registers*” as recited in exemplary dependent claim 23 and similarly recited in exemplary dependent claim 35.

Again the Examiner merely recites Applicants’ claim language and cites paragraph [0035] of Chefalas, without pointing out the specific language in Chefalas that teaches the claim limitations. Indeed, nowhere does Chefalas teach or suggest the specific indicators recited in claims 23 and 35. If the Examiner wishes to maintain this rejection, Applicants respectfully request the Examiner to specifically point out the language in Chefalas that teaches or suggests the features recited in claims 23 and 35.

Furthermore, nowhere does Chefalas teach or suggest that "*said system health monitoring program samples a plurality of parameters, said plurality of parameters including at least one of: a parameter indicating a number of bytes that must be kept in physical memory and cannot be paged out to disk; a parameter indicating a number of bytes that reside in said physical memory plus the paging files; a parameter indicating a number of errors that have been reported by transmission control protocol (TCP)/Internet Protocol (IP) software; and a parameter indicating whether said TCP errors are accompanied by Network Adapter Errors*" as recited in exemplary dependent claim 28 and similarly recited in exemplary dependent claim 36.

Again the Examiner merely recites Applicants' claim language and cites paragraphs [0031] and [0037] of Chefalas, without pointing out the specific language in Chefalas that teaches the claim limitations. Indeed, nowhere does Chefalas teach or suggest the specific indicators recited in claims 28 and 36. If the Examiner wishes to maintain this rejection, Applicants respectfully request the Examiner to specifically point out the language in Chefalas that teaches or suggests the features recited in claims 28 and 36.

To determine hardware health, the system health monitoring program 140 (of the present invention) can use resources such as concurrent diagnostics, hardware error logs, and hardware error counts. Additional FFDC (First Failure Data Capture) information is available after the event, such as (again) error logs, crash dumps of memory, error codes, offline or power-on hardware diagnostics, and hardware error registers." (see Application page 8, line 21 through page 9, line 2).

For example, nonpaged pool bytes may be sampled. This parameter reports the

number of bytes that must be kept in physical memory and cannot be paged out to disk. Thus, this is a strictly limited resource. Hence, when this parameter's limit is exceeded, the operating system may fail. A high level of utilization of this parameter therefore implies a software failure (see Application, page 15 lines 7-11).

Another parameter is committed bytes. This parameter reports the number of bytes that reside in physical memory plus the paging files, and is a limited resource. When this parameter's limit is exceeded, the operating system may fail. A high level of utilization of this parameter also implies a software failure (see Application, page 15 lines 12-15).

Yet another parameter is transmission control protocol (TCP) errors. This parameter indicates the number of errors that have been reported by the TCP/IP software. A high rate of TCP errors that are unaccompanied by Network Adapter Errors implies that there is a problem with the TCP/IP software. A high rate of TCP errors that are accompanied by Network Adapter Errors implies that there is a problem with the network adapter, which may indicate a hardware problem (see Application, page 15 lines 16-22).

The ability to use this expanded set of problem indicators (especially the resource consumption data, system utilization and performance data, concurrent diagnostic results, and hardware error logs) represents a clear improvement not taught or suggested by Chefalas. In particular, performance problems are diagnosed in the Application, and are not discussed in Chefalas.

Moreover, nowhere does Chefalas teach or suggest “*continuously monitoring and storing indicators of system software health and hardware health after said problem or outage*” (emphasis added by Applicants) as recited in exemplary claim 34.

Again the Examiner merely recites Applicants' claim language and cites paragraph [0036] of Chefalas, without pointing out the specific language in Chefalas that teaches the claim limitations. Indeed, nowhere does Chefalas teach or suggest continuously monitoring and storing indicators of system health, as taught by the claimed invention. If the Examiner wishes to maintain this rejection, Applicants respectfully request the Examiner to specifically point out the language in Chefalas that teaches or suggests the features recited in claim 34.

Therefore, Applicants submit that there are elements of the claimed invention that are not taught or suggest by Chefalas. Therefore, the Examiner is respectfully requested to withdraw this rejection.

IV. NEW CLAIMS

New claims 39-41 have been added to provide more varied protection for the claimed invention and to claim additional features of the invention. These claims are independently patentable because of the novel features recited therein.

Applicants respectfully submit that new claims 39-41 are patentable over the applied reference at least for analogous reasons to those set forth above with respect to claims 1-38.

V. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicants submit that claims 1-41, all of the claims presently pending in the application, are patentably distinct over the prior art of record

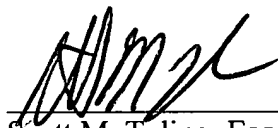
Serial No. 09/929,142
Docket No. YOR920010068US1
YOR.270

and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview. The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510

Respectfully Submitted,

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